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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/711,102
Filing Date: August 23, 2004
Appellant(s): SCHNEIDER, JOSEPH C.

Kevin R. Rosin

For Appellant

EXAMINER'S ANSWER

Art Unit: 3742

This is in response to the appeal brief filed 12-10-2007 appealing from the Office action mailed 05-18-2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

Art Unit: 3742

(8) Evidence Relied Upon

5,338,917	Stuart et al	8-1994
6,380,508	Sorkin	4-2002
5,901,465	New et al	6-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22,24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorkin in view of New et al and Stuart et al.

Claims are unpatentable over Sorkin et al in view of New et al for the same reasons set forth in the office action mailed on 05-18-2007. Amendments to the claims have further defined the handle as comprising two portions that are fixed to each other. It should be noted that New et al do teach the ends as fixed, when no adjustment is needed for the head relative to the handle. It should be noted that the two handle portions are fixed to each other in the sense that they do not break away from each other during use. For the sake of argument, the patent to Stuart et al is applied for evidencing that a MIG torch, which does produce a plasma, can have an integral handle 64, which is attached to the welding head 71 via pivoting means enclosed in 70. Column

Art Unit: 3742

9 in Stuart et al, in paragraph 2 sets forth that the head can rotate or pivot 360 degrees and also at conical angle to the axis of the head, with the benefit of a more ergonomic torch and reduced fatigue for the user. One of ordinary skill in arc torches would have found proper motivation in Stuart et al, to use an integral or fixed portion handle, in the Sorkin et al system with enhanced realm of use for the operator.

Claims 1-22,24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorkin et al in view of Stuart et al. Though Sorkin et al teach a movable welding head relative to a handle, as claimed, the patent to Stuart et al is applied for clearly teaching that a pivotable head on a MIG torch can pivot 15 degrees from an axis, and can also rotate 360 degrees around such axis, to enhance the ergonomics of the torch and one of ordinary skill in torch systems would have found it obvious to modify the Sorkin et al system with the same, to effect enhance use of such torch.

(10) Response to Argument.

The following response to applicant's arguments, set forth in the final rejection, is set forth hereinafter.

Applicant has argued that Sorkin et al do not teach a pivoting torch head, relative to the torch handle. One of ordinary skill in the art would find it obvious to include a pivot joint in a torch to enhance the direction of the torch flow and enhance the versatility of the device. This merely comprises routine level of skill and not patentable subject matter. However, the patent to

Art Unit: 3742

New et al was applied for teaching a pivotable torch head in a TIG , plasma , and torch and used to modify the Sorkin et al system to use a pivotable joint, as claimed. Though New et al also increased the versatility of their device by making a two portion handle to move the head of the torch along the torch axis, for further movement or adjustment of the torch, Applicant further amended the claims to restrict such movement of the handle portions, relative to each other. In this respect the patent to Stuart et al was applied for teaching that it is conventional in a MIG (also plasma) torch to have a handle 64, one piece integral handle, attached to a torch head , via a pivotable coupling means 70, to increase the range of movements of the torch. Clearly, Applicant can see that the concept and structure for pivotable heads, relative to torch handles, is both old and patented. The claims are not patentably distinct over the prior art applied. Note that a threaded nut connection in Stuart et al is used to restrict the movement of the head relative to the handle. Use of a specific pivotable angle as per claim 7 is both taught in the prior art and also a choice left to the discretion of the designer, dependent on undisclosed parameters of the torch and the end use of the torch. Note that the threaded adjustment in Stuart et al can limit the pivoting to chosen axes as claimed, dependent on just which axis the operator locks the nut in. The restricted movement limitations set forth in the claims are taught in the Sorkin et al system, as modified, such as in claim 17.

The following remarks are advanced in response to Appellant's arguments set forth in the instant appeal brief. With respect to the rejection of claims 1-22 and 24 as unpatentable over Sorkin in view of New et al and Stuart et al, the patent to Sorkin teaches a plasma torch 20 which has a swiveling head 24 for cutting purposes. As set forth in the rejection, Sorkin does not teach,

Art Unit: 3742

“a torch head having a restricted pivotable connection to the torch body”, as claimed. It should be noted that since the swiveling is considered restricted to 360 degrees in a planar direction, this is considered "restricted", barring further description of the same in the claim language. to clearly evidence that a torch head can pivot, for the obvious reason of enhancing the directive uses of the torch. The patent to New et al has been applied for clearly evidencing that a torch head can pivot, as claimed. The claim amendments set forth that the handle has two ends, fixed with respect to each other and the patent to Stuart et al was included in the rejection for evidencing that a MIG torch, also plasma, can have a an integral handle 64 attached to welding head 70. Column 9 in Stuart et al, also mentions that pivoting of the head can occur.

Clearly this teaching provides proper motivation for one of ordinary skill in plasma and other welding torches, to modify a torch such as set forth in Sorkin, to have the use of pivoting/swiveling, to enhance the range of use of the torch.

With respect to the rejection of claims 1-22,24 over Sorkin in view of Stuart et al, the patent to Stuart et al is applied for clearly teaching that a MIG torch, also in the plasma family, can pivot 15 degrees from an axis and can also rotate 360 degrees. See figures 6-8 in Stuart et al. Clearly the patent to Stuart et al would also provide adequate motivation for the artisan to modify the Sorkin system to have these further degrees of motion, to enhance the range of movement and hence uses of the torch.

Appellant's advance on page 3 of the brief that the outstanding rejections are defective. This argument is without merit since the rejection sent out on 5/18/2007 clearly defines the rejection of Sorkin in view of New et al and Stuart et al. As Appellant's are reminded, the patent

Art Unit: 3742

to New et al was included in the rejection of the claims, in response to amendments to the claims setting forth that the handle has two ends, fixed with respect to each other. Both patents to New et al and Stuart et al define pivoting heads on a torch, of the plasma nature, as claimed.

Appellant's primary argument on pages 4-5 in the brief advance that , "the welding gun disclosed in Stuart et al is for a MIG welding system, not a plasma cutting system as is called for in the current claims". A brief review of the torch art reveals that Mig (metal inert gas) and Tig (tungsten inert gas) are analogous art to plasma torches. In all three systems referenced above, a gas is ionized producing a high temperature arc flow. In Tig the non-consumable electrode is obviously tungsten. In Mig a non-consumable electrode is combined with wire feed and produces a temperature of 10,000 degeed F as set forth in column 2, line 20 in Stuart et al. All of these torches ionize a gas, oxidizing or non-oxidizing, to produce an arc flow that does construe a plasma. Class 219, the electrical torch class enclosed, is replete with references that equate these torches. In fact class 219 subclass 121.45 and 121.46 is referenced under plasma torches and also contains MIG torches. When searching plasma and MIG cases the Examiner routinely searches both the plasma torch area and the generic torch areas for references that apply. Appellants have not argued that Mig torches do not create a plasma. They do create a plasma. These arts are completely analogous and the references are correctly applied in the above rejections.

In addition, both Stuart et al and New et al are relied on not for teaching plasma flows but for showing an integral handle in a torch as conventional and for showing a pivoting head in a torch as conventional. One of ordinary skill in welding or cutting would have found it obvious

Art Unit: 3742

and well within ordinary skill in the art to modify the Sorkin with enhanced use capability by providing a pivotable head on the torch, as set forth in the rejections.

Page five of the brief argue that some plasma torches have a contact start and air flow system. This is correct, but has no bearing on the claims at appeal since these features are not set forth in the instant claims. This argument carries no patentable weight.

Pages 5 and 6 in the brief discuss that the Stuart et al and New et al systems would not function together to effect the instant device. It is submitted that the two part handle in New et al can also be fixed, in operation to effect an integral handle. In this respect the patent to Stuart et al was included in the rejection above to evidence that a handle of a torch can comprise an integral handle, as Appellant's recognize on page 6, paragraph 2 in the brief. The two part handle of New et al would provide even further movement of the torch head with enhanced use. But the Stuart et al patent was applied for clearly teaching that a MIG torch, with a pivotable head, can have an integral, one-piece handle. This does not comprise a stretching of the references, as Appellant's suggest, but comprises art skill, whether applied to MIG, TIG or plasma torches. Claim 1 for instance, very broadly claims a torch with an integral handle and a pivoting torch, these features clearly taught by the prior art applied. Once the torch pivot is chosen and the head secured, this clearly comprises a restrictable pivoting motion, as claimed.

Even aside from the KSR Int'l Co v. Teleflex, Inc decision as advanced on page 7 in the brief, it is clear from the rejection that the subject matter of the claims is obvious, and shows all of the claimed elements.

Art Unit: 3742

New et al provide proper motivation for the combination of the references since New et al in column 4, lines 52-54, very clearly state that, "It will be observed from the foregoing that the torch 10 of the present invention is easy to use and the head 70 of the torch is readily adjustable to different positions."

Stuart et al in the abstract advance that the pivoting of 15 degrees and rotation of 360 degrees, of the head of the torch, lead to an ergonomically designed welding gun, quick release of the of the supply lines and an improved nozzle and diffuser, further describing in the specification of easy replacement of parts.

Clearly, the artisan would have been motivated by such clear teachings to enhance the use of and parts replacement and servicing of the Sorkin torch by including these features. In view of this, proper motivation is present to satisfy this aspect a prima facie case for obviousness.

Applicant's arguments further advance that the elements of the torches cannot be combined, successfully to effect a working device. To modify the Sorkin torch head with a pivoting joint, as taught in both Stuart et al and New et al, is not very complex, as Appellant's argue. Looking to Figure 2 in Sorkin , such pivoting joint could be placed at the joint between elements 22 and 24. such pivoting joint would be gas tight and water tight and merely encompasses a pivoting joint to lead to enhanced applications for the torch and easier maintenance of the torch. The artisan would have found such modification, routine and leading to success.

Art Unit: 3742

In view of a pre-appeal conference in the instant prosecution, a new rejection, leaving out the Stuart et al patent was issued, Sorkin teaching the basic plasma torch and the patent to New et al relied on for teaching a pivotable head, element 78 in figure 4 in New et al. it was discussed at the above conference that the two part handle of New et al would have two ends, which are fixed during use, thereby satisfying the limitations of claims. Note that the abstract in New et al clearly discloses that the handle sections would be locked after adjustment of the swivel, satisfying a handle with two fixed ends and a swiveling head that can be locked at a certain position. Claim 1 contains no limitations aside from these limitations.

As per claims 3 and 4, use of an indexing or ratcheting system for head adjustment is well with the level of ordinary skill in the art, noting infinite adjustment is taught in New et al and Stuart et al.

Appellant's advance in paragraph 3 on page 10 in the brief that, "while New et al and Stuart et al may teach a pivotable connection between a torch head and a torch body, neither reference teaches or suggests a restrictable pivotable connection between the torch head and the torch body as called for in claim 1". This argument is without merit since both the Stuart et al and the New et al systems include a locking positioning for the head relative to the torch during use. This locking very clearly teaches a restrictable movement, as the claims are silent as to just what such movement comprises. Paragraph 3 on page 10 further states, "When the ball and socket connection is loosened, the pivotable member is allowed to move freely and unrestricted". It is clear from this argument that when the ball and socket is tightened, a restricted torch head is

Art Unit: 3742

effected and the head is confirmed such as pivotable. These arguments only buttress the Examiner's reasoning and rejection of the claims at appeal. Pages 10 and 11 in the Brief advance that Stuart et al is drawn to welding while the instant torch is disclosed as for cutting. As argued above, these torches are analogous and a welding torch can be used to cut and a cutting torch can be used to weld, as per intended use of the device. Applicant's claims are silent as to any further definition of the same. In addition, the patent to New et al equates cutting gouging and welding, see the abstract and see column 2, line 13.

In conclusion, for the reasons set forth supra, Sorkin , New et al and Stuart et al do comprise analogous art. As very clearly set forth above both New et al and Stuart et al provide proper motivation for one of ordinary skill in the art to provide a pivoting action to a plasma torch head, relative to the torch handle. As set forth above such modification would merely encompass providing a pivoting joint, such as taught in New et al or Stuart et al, between the head and handle in the Sorkin system, This modification well within the level of ordinary skill in the torch art. The likeliness of success is evident, given the simplicity of providing such pivoting joint. As set forth above all of the claimed elements would be included in the Sorkin system as modified. As for claim 5 the pivoting of the torch head could be pivotable in no more than two axes, depending on the action of the operator, not disclosed.

Art Unit: 3742

For these reasons a prima facie case for obviousness has been established, all of the claimed elements are obvious over the applied references and reasonable success would be effected by the combination of the patents. The rejection of claims 1-22 and 24 is proper and should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Mark H. Paschall

/Mark H Paschall/

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Art Unit: 3742

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